Answer on question 34446 – Math – Calculus

Estimate the limit numerically.

lim x→0 x − 20/x − 4

Estimate the limit numerically

lim x→+infinity 9x2 + 6x − 3/ 2x2 − 5x

Solution

$$\lim_{x\to 0}\frac{x-20}{x-4}=(substitute\ x=0)=\frac{-20}{-4}=5.$$

$$\lim_{x\to\infty}\frac{9x^2+6x-3}{2x^2-5x}=\lim_{x\to\infty}\frac{9+\frac{6}{x}-\frac{3}{x^2}}{2-\frac{5}{x}}=\left(\frac{6}{x}\to 0,\frac{3}{x^2}\to 0\ and\ \frac{5}{x}\to 0\right)=\frac{9}{2}.$$

Answer: 5; 4.5.